

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A magnetic reproducing head having a magnetic gap at a medium-facing surface, comprising:

a pair of magnetic yokes of ferromagnetic material having the magnetic gap formed between the pair of magnetic yokes, one of the pair of magnetic yokes having a magnetic tip at the medium-facing surface and a rear portion recessed from the medium-facing surface and magnetically coupled to the magnetic tip, the magnetic tip having a first width in a track width direction at the medium-facing surface, the rear portion having a second width in the track width direction, and the second width being wider than the first width;

a magnetoresistance effect film recessed from the medium-facing surface, disposed between the pair of magnetic yokes and magnetically coupled to the pair of magnetic yokes of ferromagnetic material, the rear portion of the one of the pair of magnetic yokes and the magnetoresistance effect film being aligned in a track length direction;

an insulation layer disposed between each of the pair of magnetic yokes and the magnetoresistance effect film; and

a pair of biasing films recessed from the medium-facing surface, one of the pair of biasing films comprising a hard magnetic material layer disposed adjacent to the rear portion or an antiferromagnetic material layer disposed in contact with the rear portion, the rear portion of the one of the pair of magnetic yokes and the pair of biasing films being aligned in the track width direction.

Claim 2 (Original): The magnetic reproducing head of claim 1, wherein each of the pair of magnetic yokes of ferromagnetic material comprises a front surface parallel to the



medium-facing surface and a rear surface parallel to the medium-facing and front surfaces, and wherein the magnetoresistance effect film has a film surface parallel to the rear surfaces.

Claim 3 (Original): The magnetic reproducing head of claim 2, wherein the magnetoresistance effect film is disposed between the pair of magnetic yokes of ferromagnetic material and recessed from the medium-facing surface.

Claim 4 (Original): The magnetic reproducing head of claim 1, wherein the magnetic tip and rear portion comprise a continuously formed ferromagnetic material body.

Claim 5 (Original): The magnetic reproducing head of claim 1, wherein the magnetic tip is discrete from the rear portion.

Claim 6 (Original): The magnetic reproducing head of claim 1, further comprising a pair of electrodes, one of the pair of electrodes being coupled to a lower film surface of the magnetoresistance effect element and another one of the pair of electrodes being coupled to an upper film surface of the magnetoresistance effect element.

Claim 7 (Original): The magnetic reproducing head of claim 1, wherein the one of the pair of magnetic biasing films comprises the hard magnetic material layer and the hard magnetic material layer is disposed in contact with a side surface of the rear portion of the magnetic yoke.

Claim 8 (Original): The magnetic reproducing head of claim 7, wherein the side surface of the rear portion is tapered.



Claim 9 (Withdrawn): The magnetic reproducing head of claim 1, wherein each of the pair of magnetic biasing films comprises the antiferromagnetic material layer and the antiferromagnetic material layer is disposed in contact with a lower or an upper surface of the rear portion, the lower surface being a side of the medium-facing surface and the upper surface being remote from the medium-facing surface.

Claim 10 (Currently Amended): A magnetic reproducing apparatus for reproducing magnetic information recorded on a magnetic medium, comprising:

a magnetic reproducing head having a magnetic gap at a medium-facing surface, comprising:

a pair of magnetic yokes of ferromagnetic material having the magnetic gap formed between the pair of magnetic yokes, one of the pair of magnetic yokes having a magnetic tip at the medium-facing surface and a rear portion recessed from the medium-facing surface and magnetically coupled to the magnetic tip, the magnetic tip having a first width in a track width direction at the medium-facing surface, the rear portion having a second width in the track width direction, and the second width being wider than the first width,

a magnetoresistance effect film recessed from the medium-facing surface, disposed between the pair of magnetic yokes and magnetically coupled to the pair of magnetic yokes of ferromagnetic material, the rear portion of the one of the pair of magnetic yokes and the magnetoresistance effect film being aligned in a track length direction,

an insulation layer disposed between each yoke of the pair of magnetic yokes and the magnetoresistance effect film, and

a pair of biasing films recessed from the medium-facing surface, one of the pair of biasing films comprising a hard magnetic material layer disposed adjacent to the rear portion



or an antiferromagnetic material layer disposed in contact with the rear portion, the rear portion of the one of the pair of magnetic yokes and the pair of biasing films being aligned in the track width direction.

Claims 11-19 (Cancelled).

Claim 20 (Currently Amended): A magnetic reproducing head having a magnetic gap at a medium-facing surface, comprising:

a pair of magnetic yokes of ferromagnetic material, each of the pair of magnetic yokes having a magnetic tip at the medium-facing surface and a rear portion recessed from the medium-facing surface and magnetically coupled to the magnetic tip, at least one ~~magnetic~~ magnetic tip of the pair of magnetic yokes having a first width in a track width direction at the medium-facing surface, at least one rear portion of the pair of magnetic yokes having a second width in the track width direction, and the second width being wider than the first width;

a magnetoresistance effect film recessed from the medium-facing surface, disposed between the pair of magnetic yokes and magnetically coupled to the pair of magnetic yokes of ferromagnetic material, the rear portion of one of the pair of magnetic yokes and the magnetoresistance effect film being aligned in a track length direction;

an insulation layer disposed between each of the pair of magnetic yokes and the magnetoresistance effect film; and

a pair of biasing films recessed from the medium-facing surface, one of the pair of biasing films comprising a hard magnetic material layer disposed adjacent to the rear portion or an antiferromagnetic material layer disposed in contact with the rear portion, the rear



portion of the one of the pair of magnetic yokes and the pair of biasing films being aligned in the track width direction.

Claim 21 (Previously Presented): The magnetic reproducing head of claim 20, wherein each of the pair of magnetic yokes of ferromagnetic material comprises a front surface parallel to the medium-facing surface and a rear surface parallel to the medium-facing and front surfaces, and wherein the magnetoresistance effect film has a film surface parallel to the rear surfaces.

Claim 22 (Previously Presented): The magnetic reproducing head of claim 21, wherein the magnetoresistance effect film is disposed between the pair of magnetic yokes of ferromagnetic material and recessed from the medium-facing surface.

Claim 23 (Previously Presented): The magnetic reproducing head of claim 20, wherein the magnetic tip and rear portion comprise a continuously formed ferromagnetic material body.

Claim 24 (Previously Presented): The magnetic reproducing head of claim 20, wherein the magnetic tip is discrete from the rear portion.

Claim 25 (Previously Presented): The magnetic reproducing head of claim 20, further comprising a pair of electrodes, one of the pair of electrodes being coupled to a lower film surface of the magnetoresistance effect element and another one of the pair of electrodes being coupled to an upper film surface of the magnetoresistance effect element.



Claim 26 (Previously Presented): The magnetic reproducing head of claim 20, wherein the one of the pair of magnetic biasing films comprises the hard magnetic material layer and the hard magnetic material layer is disposed in contact with a side surface of the rear portion of the magnetic yoke.

Claim 27 (Previously Presented): The magnetic reproducing head of claim 26, wherein the side surface of the rear portion is tapered.

Claim 28 (Currently Amended): A magnetic reproducing apparatus for reproducing magnetic information recorded on a magnetic medium, comprising:

a magnetic reproducing head having a magnetic gap at a medium-facing surface, comprising:

a pair of magnetic yokes of ferromagnetic material, each of the pair of magnetic yokes having a magnetic tip at the medium-facing surface and a rear portion recessed from the medium-facing surface and magnetically coupled to the magnetic tip, at least one magnetic tip of the pair of magnetic yokes having a first width in a track width direction at the medium-facing surface, at least one rear portion of the pair of magnetic yokes having a second width in the track width direction, and the second width being wider than the first width,

a magnetoresistance effect film recessed from the medium-facing surface, disposed between the pair of magnetic yokes and magnetically coupled to the pair of magnetic yokes of ferromagnetic material, the rear portion of one of the pair of magnetic yokes and the magnetoresistance effect film being aligned in a track length direction,

an insulation layer disposed between each yoke of the pair of magnetic yokes and the magnetoresistance effect film, and



a pair of biasing films recessed from the medium-facing surface, one of the pair of biasing films comprising a hard magnetic material layer disposed adjacent to the rear portion or an antiferromagnetic material layer disposed in contact with the rear portion, the rear portion of the one of the pair of magnetic yokes and the pair of biasing films being aligned in the track width direction.